REMARKS

Applicant respectfully requests reconsideration of this application. Claims 86-123 are currently pending, with two instances of claim 114.

Claims 86, 96, 97, 101-104, 113, and 115 have been amended. The second instance of claim 114 has been cancelled. Claim 124 has been added.

Therefore, claims 1-124 are now presented for examination.

Claim Objections

The Examiner has objected to Claim 114. The claims were numbered incorrectly, with two Claim 114's.

In order to correct the error in numbering, the second Claim 114 has been cancelled, with the subject matter of this claim being added as a new Claim 124. It is submitted that the amendment addresses the objection of the claim.

Claim Rejections under 35 U.S.C. §112

The Examiner rejected claims 96, 97, 101-104, 114-1st instance (now claim 114), 114-2nd instance (now claim 124), and 115 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description.

Specifically, the Final Office Action indicates that: "The claims contain or depend from claims that contain the limitation 'generating additional data', the original disclosure does not contain this term therefore this is interpreted as 'new matter."

The rejection is not supported by law. There is no requirement in U.S. patent law that the same term be used in the claims and the disclosure in order for the claims to be supported by the disclosure. For at least this reason, the Final Office cannot legally reject a claim on this basis. As indicated in the MPEP:

> There should be clear support or antecedent basis in the specification for the terminology used in the claims. Usually, the original claims follow the nomenclature of the specification; but sometimes in amending the claims or in adding new claims, applicant employs terms that do not appear in the specification. This may result in uncertainty as to the interpretation to be given such terms. See MPEP § 608.01(o). It should be noted, however, that exact terms need not be used *in haec verba* to satisfy the written description requirement of the first paragraph of 35 U.S.C. 112. *Eiselstein v. Frank*, 52 F.3d 1035, 1038, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995); *In re Wertheim*, 541 F.2d 257, 265, 191 USPQ 90, 98 (CCPA 1976). See also 37 CFR 1.121(e) which merely requires *substantial* correspondence between the language of the claims and the language of the specification.

(MPEP § 1302.01) Thus, the Final Office Action cannot reject a claim because the terminology is different than the specification if there is substantial correspondence between the language of the claims and the language of the specification. Further:

> While there is no in haec verba requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure.

(MPEP §2161) Thus, the proper standard is whether the claim limitations are supported in the specification by express, implicit, or inherent disclosure, not whether the particular term is present in both the claims and the specification – this is not required by law, and cannot be the basis for rejection.

With regard to the support for the claims, paragraph 0124 of the Specification indicates that within the disclosure a closed unit may be referred to as a "DDR Unit":

> [0124] In a typical embodiment of the open computing systems described in U.S. patent application Ser. No. 10/679,055, a closed subsystem of the open system includes a closed unit (sometimes referred to as a "DDR" unit) that receives encrypted content (e.g., from a source external to the open system), performs decryption and any required decompression on the received content to generate raw content, and re-encrypts the raw content. …

Paragraph 0125 then an embodiment in which the output of the DDR unit is combined with a particular kind of additional data, which is unprotected graphics and audio output:

> [0125] An aspect of each system described below with reference to FIGS. 4 and 5 is circuitry for combining the output of a DDR unit with standard (unprotected) graphics and audio output of an open system. Typically, modern PCs have one of two types of graphics systems. Low end PCs have a graphics controller integrated into their chipset (e.g., into GMCH chip 6 of FIG. 4) and use an AGP Digital Display card (e.g., an ADD card similar or identical to card 10 of FIG. 4) to route the digital video connection to a bulkhead HDMI/DVI connector. Higher end PCs typically use a more sophisticated graphics controller directly on an AGP or PCI-Express graphics card (e.g., a media/graphics card similar to card 20 of FIG. 5). Older PCs use a graphics controller on either AGP, PCI, or ISA bus. In any case, there is typically a single board in the system that provides the video output for the system. We will call this board the "graphics card", regardless of the type of card it is.

Paragraph 0149 then specifically describes an embodiment in which a multiplexer, decoder, transmitter, and interface are implemented in a closed subsystem of a PC. As described, the closed subsystem then receives both the unprotected content, which is asserted to the interface, and copyrighted content, which is asserted to the decoder. This describes an embodiment in which a closed subsystem processes both encrypted data and additional unprotected data:

> [0149] In another class of embodiments, multiplexer 31, decoder 32, HDMI transmitter 33, and SATA interface 34 of FIG. 6 are implemented as a closed subsystem of a PC, separate and independent of a DVD drive (the PC may not even include a DVD drive). For example, multiplexer 31 can be coupled to receive data that have been asserted to PC 1 from the Internet. When multiplexer 31 detects that such data are non-protected content, multiplexer 31 asserts the data to SATA interface 34. Otherwise (e.g., when multiplexer 31 detects that the data from controller 30 are copyrighted content), multiplexer 31 asserts the data from controller 30 to decoder 32. Decoder 32 is configured to perform decryption and decompression of the data (which can be high definition video data, or other video data, for example). HDMI transmitter 33 re-encrypts the resulting raw data (e.g., raw video data) according to the HDCP protocol, and transmits the re-encrypted data over an HDMI link, e.g., directly to ADD card 10 (or a variation thereon) or to media/graphics card 20 (or a variation thereon). The DDR unit would preferably implement secure key exchange, expiration, and revocation mechanisms (e.g., such mechanisms could be implemented within HDMI transmitter 33).

(emphasis added) To further clarify, the claims have been amended to refer to additional "unprotected" data to more closely follow the terminology used in the specification.

It is submitted that the claims, as amended, are supported by the specification, and the rejection thus should be removed.

Claim Rejections under 35 U.S.C. §112

The Examiner rejected claims 113-115 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. The Final Office Action specifically cites to MPEP §2173.05(c).

MPEP §2173.05(c) regards a numerical ranges and amounts limitations, which are not present in the claims at issue. If a claim does not include a numerical range or amount limitation, this section is not actually applicable. As described in this section of the MPEP:

> **2173.05(c) Numerical Ranges and Amounts Limitations**
>
> Generally, the recitation of specific numerical ranges in a claim does not raise an issue of whether a claim is definite.
>
> I. NARROW AND BROADER RANGES IN THE SAME CLAIM
>
> Use of a narrow numerical range that falls within a broader range in the same claim may render the claim indefinite when the boundaries of the claim are not discernible. Description of examples and preferences is properly set forth in the specification rather than in a single claim. A narrower range or preferred embodiment may also be set forth in another independent claim or in a dependent claim. If stated in a single claim, examples and preferences lead to confusion over the intended scope of the claim. In those instances where it is not clear whether the claimed narrower range is a limitation, a rejection under 35 U.S.C. 112, second paragraph should be made. The Examiner should analyze whether the metes and bounds of the claim are clearly set forth. Examples of claim language which have been held to be indefinite are (A) "a temperature of between 45 and 78 degrees Celsius, preferably between 50 and 60 degrees Celsius"; and (B) "a predetermined quantity, for example, the maximum capacity."

However, the Final Office Action then refers to the holding in *Ex Parte Wu*. The MPEP includes the following standard rejection language in §706.03(d) with regard to this ruling:

¶ 7.34.04 Broader Range/Limitation And Narrow Range/Limitation in Same Claim

> A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim [1] recites the broad recitation [2], and the claim also recites [3] which is the narrower statement of the range/limitation.

The claims regard a closed subsystem that is within an open architecture. To clarify the intent of the claims, claim 113 has been amended to indicate that there is an exception to the operations allowed in the open system architecture.

With regard to the rewriting of claim 113 in the Final Office Action, the Final Office Action misinterprets claim 113, and thus this portion of the rejection must be removed. Without any concession regarding the manner in which the Examiner has rewritten the claim – the form of which the Applicant submits is improper – with the claim indicating in part that the end user cannot add "software". As all persons of skill in the art are aware, software represents a series or other grouping of instructions. However, as those of skill in the art would also understand, software is simple a particular form of data – it is NOT all forms of data. A prohibition against the addition of software does not prohibit the importation of all data because even though software is data, all data is NOT software. By analogy in following the interpretation provided in the Final Office Action, a sign saying "No Dogs Allowed" would prohibit all animals (including people) because dogs are animals.

Specification

The rejection of the specification is again based on the claim limitation of "generating additional data". The support for this claim limitation has been described above.

The specification thus provides adequate antecedent basis for the claims as amended herein.

Claim Rejections under 35 U.S.C. §102

xCP Cluster Protocol

The Examiner rejected claims 86, 87, 89-91, 93-95, 98-99, 105-106, 110-113, 116-119 and 122 under 35 U.S.C. 102(b) as being anticipated by "IBM Response to DVB-CPT Call for Proposals for Content Protection & Copy Management: xCP Cluster Protocol", published 19 October 2001 (hereinafter referred to as *"xCP Cluster Protocol"*).

Claim 1, as amended here, provides as follows:

86. A method for protecting data in an apparatus having an open system architecture comprising:

receiving encrypted data in the apparatus having an open system architecture;

generating raw data in a closed subsystem of the apparatus within the open system architecture, the raw data being generated in the closed subsystem by decrypting the encrypted data and optionally performing additional processing on the encrypted data;

preventing access to the raw data outside of the closed subsystem;

generating protected data in the closed subsystem by re-encrypting the raw data; and

asserting the protected data from the closed subsystem to an external device or system.

In addition to any other differences, it is respectively submitted that the reference does not provide for receiving encrypted data in the apparatus having an open system architecture, or for generating raw data in a closed subsystem of the apparatus within the open system architecture.

The *xCP Cluster Protocol* describes a content protection proposal regarding access to copy-protected content in a home network. However, the reference does not teach or suggest the elements of claim regarding receiving data in an apparatus having an open system architecture, generating raw data in an closed subsystem of the apparatus within the open system architecture. The reference makes no mention of a closed subsystem within an open system architecture. It does not appear that this concept is described in the reference.

With regard to the relevant elements of claim 86, the Final Office Action cites to paragraphs 1-4 of page 6 and paragraph 2 and 3 of page 7 of the reference. However, nothing in the cited portions of the reference makes any reference to a closed subsystem within an open system architecture.

Further, this concept is not inherent in a process for decryption or encryption of data – encryption and decryption can occur in any kind of system. The reference discusses in the keys used in encryption in considerable depth, but this is not relevant to whether the operations are occurring in a closed subsystem within an open system architecture.

The reference does describe an ”xCP cluster”, such as illustrated in Figure 1 on page 5 of *xCP Cluster Protocol*. However, this is a network architecture, and includes a number of devices in a home network. This has no relevance to the system architecture of an apparatus within the network.

The *xCP Cluster Protocol* system actually uses a different kind of method to protect data, and this method involves is a particular encryption key strategy:

> Each piece of content or each content stream in the home is protected with a unique key. These keys are called title keys. Each title key is encrypted with the master key for the particular home, called the binding key. To play content, a device reads the encrypted title key embedded in the content file and decrypts it with the binding key. Then, with the title key, the device decrypts the content itself.
>
> Thus, the binding key is the important secret in a given network. It is calculated as the cryptographic hash of three quantities: the media key, the network's binding ID, and network's authorization table. The media key is, in turn, calculated from the media key block. This is the calculation that separates the compliant devices from the circumvention devices, and is the basis of the renewability in the system. If the media key block is

> up-to-date, no known circumvention device will be able to calculate the correct media key from it.
>
> The second element, the network binding ID, is established by the first server that connects to the given network. There is no reason for the ID to be known outside of the network, so compliant devices keep it as a secret. The third element, the network authorization table, is a simple file. However, by including it in the binding key calculation, it prevents a man-in-the-middle on the network from isolating devices from one another, for the purpose of avoiding limitations on the number of devices allowed in a network.

(*xCP Cluster Protocol*, page 6, ¶¶4-6) Thus, the concept that is being discussed in the reference is an encoding process. The reference describes a particular network architecture that this encoding process may be used within. However, there is no discussion of the architecture of an apparatus within the network with regard to any closed subsystem within an open system architecture.

The arguments presented here with regard to claim 89 also apply to independent claims 99, 113, and 119, and such claims are also allowable. The remaining claims are dependent claims and are allowable as being dependent on the allowable base claims.

Claim Rejection under 35 U.S.C. §103

xCP Cluster Protocol in view of Porter, et al.

The Examiner rejected claims 88 and 123 under 35 U.S.C. 103(a) as being unpatentable over *xCP Cluster Protocol* in view of U.S Patent No. 7,055,038 of Porter et al. ("*Porter*").

The rejected claims are dependent claims, and thus such claims, while having other differences with the cited references, are allowable as being dependent on the allowable base claims.

While *Porter* is cited for other purposes, it is submitted that such reference does not teach or suggest the limitations shown to be missing from *xCP Cluster Protocol*. *Porter* regards maintaining secure and nonsecure data in a shared memory system, and specifically discusses the decryption of data storing of decrypted data in a protected portion of memory, and the limitation of access to the memory.

Thus, *Porter* does not teach or reasonably suggest the elements of the rejected claims. The rejected claims thus are patentable over the combination of *xCP Cluster Protocol* and *Porter*.

Claim Rejection under 35 U.S.C. §103

xCP et al. in view of Matsuzaki et al.

The Examiner rejected claims 92, 96, 97, 101, 102, 104, 107, 109, 114 second instance (now claim 124), 115, 120, and 121 under 35 U.S.C. 103(a) as being unpatentable over *xCP Cluster Protocol* in view of U.S Patent Publication No. 2003/0145336 of Matsuzaki et al. ("*Matsuzaki*").

The rejected claims are dependent claims, and thus such claims, while having other differences with the cited references, are allowable as being dependent on the allowable base claims.

While *Matsuzaki* is cited for other purposes, it is submitted that such reference does not teach or suggest the limitations shown to be missing from *xCP Cluster Protocol*.

Matsuzaki regards an encryption transmission system, which specifically involves a video signal and an audio signal being time division multiplexed, encrypted, and transmitted.

Thus, *Matsuzaki* does not teach or reasonably suggest the elements of the rejected claims. The rejected claims thus are patentable over the combination of *xCP Cluster Protocol* and *Matsuzaki*.

Claim Rejection under 35 U.S.C. §103

xCP in view of Laksono

The Examiner rejected claims 100, 103, 108, and 114 first instance under 35 U.S.C. 103(a) as being unpatentable over *xCP Cluster Protocol* in view of U.S Patent Publication No. 2003/0156218 of Laksono ("*Laksono*").

The rejected claims are dependent claims, and thus such claims, while having other differences with the cited references, are allowable as being dependent on the allowable base claims.

While *Laksono* is cited for other purposes, it is submitted that it appears that such reference does not teach or suggest the limitations shown to be missing from *xCP Cluster Protocol*. *Laksono* discusses the multiplexing of a plurality of channels in a multimedia system.

Thus, *Laksono* does not teach or reasonably suggest the elements of the rejected claims. The rejected claims thus are patentable over the combination of *xCP Cluster Protocol* and *Laksono*.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (503) 439-8778 if there remains any issue with allowance of the case.

Request for an Extension of Time

The Applicant respectfully petitions for a two-month extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a. Please charge any fee to our Deposit Account No. 02-2666.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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